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Appl. No: 10/601, 280

REJECTION OF CLAIMS 2, 11, 12, 19 AND 20 UNDER 35 U.S.C. 112, SECOND PARAGRAPH

Applicant has addressed the various rejections by the Examiner. Respecting claim 2, the rejection is now moot since claim 2 has been cancelled. Claim 11 has been amended so that the free flow areas are referenced with respect to their respective cross sections. Accordingly, it is believed that the free flow cross section with respect to an area is proper.

With respect to claim 19, applicant has amended the claim to avoid the Examiner's rejection thereof by deleting "connecting device" in line 5.

In view of the amendments to the claims and the above discussion, the rejection under 35 U.S.C. 112, second paragraph are believed to have been eliminated.

Withdrawal of claims 2, 11, 12, 19 and 20 under 35 U.S.C. 112, second paragraph is respectfully requested.

REJECTION OF CLAIMS 6, 8, 10-12, 19, 21 AND 22 UNDER 35 U.S.C. 102(b) OVER RAU

The Examiner has newly cited the Rau reference to and postulated that Rau clearly anticipates claim 21 and that Rau has connection devices (referring to numerals 12 and 18 in Fig. 3?) in Rau that are suitable for a tubeless connection to a blood vessel as in claim 21.

Applicant respectfully disagrees with the Examiner's postulation.

The object of the present invention as stated in the description refers to a blood pump for tubeless implantation into a vascular section (see description paragraph [0017]). The pump is constructed for a direct connection to the blood vessel. (paragraph [0018]). This direct connection is the tubeless connection as claimed in claim 21.

Rau on the other hand discloses a blood pump which clearly has no tubeless connection and in fact is not suitable for a tubeless connection.

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Fig. 2a in Rau show the pump being connected via a tube to the blood vessel. In col. 3, line 58-59, it is set forth that "the outlet 18 of the blood pump BP is connected with a port 43a to the aorta AO". Moreover, in line 60 to 63, the connection is further described as having a connection with a "port 40a to the left atrium and a port 43a to the aorta AO. These connections are shown in Fig. 2a and 2b wherein the "ports" are clearly shown as separate structures connecting the pump to the respective vascular pieces. The Figs.2a and 2b also indicate for example the suturing of the tubes to the pump. Accordingly, the examiner's statement that the Rau pump is tubelessly connected to a vascular tissue is incorrect, since the Figs as well as the description Rau clearly show that the connection is mediated through "ports" that must be either tubes or tubelike structures.

The pump as disclosed in Rau is unsuitable for a tubeless connection since the inlet and outlet of the pump were not designed or configured for a tubeless connection. The Examiner states that the Rau blood pump is capable of being tubelessly connected even if such was not intended. With this statement, the Examiner supplants his own knowledge of what the Rau pump is capable of, since if one were to attempt to make a tubeless connection with the inlet and outlet of the pump, the vascular tissue would die off in the shortest time and the connection become leaky.

The Examiner also addressed the claimed dimensional limitations of the pump. However Rau specifically requires that the housing to be elongated and that the extended flow of the blood is for cooling purposes; see col. 1, lines 44-49, and col. 2, lines 33-35 and as shown in both Figs. 1 and 3.

With respect to the function of the webs (claim 10) the Examiner takes the position that the structures 53 and 54 (guide plates) would serve this purpose and such purpose could be inferred from the embodiment in Fig. 3. Applicant disagrees with this interpretation. The guide plates are nowhere identified as carrying electrical cables or such that power the motor. In fact, the function of the guide plates are not only specifically discussed col. 4, lines 9-21, but the following paragraph starts with the sentence "otherwise, the blood pump of Fig. 3 is

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constructed the same as the blood pump in Fig. 1. It is provided with magnetic coupling 25 for driving the impeller." This completely contradicts the Examiner's position. Again, the Examiner introduces conjectures into structures that do not carry out the alleged function.

REJECTION OF CLAIMS 2, 4, 5 AND 20 UNDER 35 U.S.C. 103(a) OVER RAU

The rejection is respectfully traversed. Claim 2 has been cancelled. Concerning claims 4 and 5, Rau teaches an elongated body of a blood pump. The elongation is critical in so far as the elongated body provides the flow of blood that can cool the motor, see additional discussion on this point *supra*. Since the body shape of the blood pump is considered critical to the described function, the shape of the claimed blood pump distinguishes over the cited Rau reference.

Regarding claim 20 as now presented, that claims recites the *direct* suturing of the connection devices of the pump to the vascular tissue. The Examiner's statement that suturing is obvious misses the point that the pump is sutured directly to the vascular tissue via the connection devices of the pump.

REJECTION OF CLAIMS 13 TO 15 UNDER 35 U.S.C. 103(a) OVER RAU IN VIEW OF CHARDACK

The rejection by the Examiner is respectfully traversed.

Chardack teaches that two pumps can be installed for left ventricle assist. The pumps do not show tubeless connections. Furthermore, the Rau pump is not built for a tubeless connection, whether one or two pumps are used and whether or not a structure 78 supporting controllers 44 in Chardack exists. Based on the examiner's comments, no *prima facie* case of obviousness has been made out here.

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**REJECTION OF CLAIMS 17 AND 18 UNDER 35 U.S.C. 103(a) OVER RAU IN
VIEW OF GOLDOWSKY**

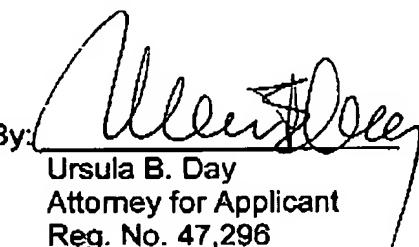
The rejection is respectfully traversed. Claim 18 has been cancelled such that the rejection thereof is moot.

The Goldowsky reference simply states that the pump can be attached to the rib cage. One assumes that many pumps can be attached to the ribcage. However the presently amended claim 17 depends from a claim specifying a tubeless connection. Neither Rau nor Goldowsky show any tubeless connections. Consequently, the claim distinguishes over the prior art.

In view of the above discussion, each of the presently pending claims in this application is considered patentably differentiated over the prior art of record and believed to be in condition for allowance. Reconsideration and allowance of the present application are thus respectfully requested.

Should the Examiner consider necessary or desirable any formal changes anywhere in the specification, claims and/or drawing, then it is respectfully requested that such changes be made by Examiner's Amendment, if the Examiner feels this would facilitate passage of the case to issuance. If the Examiner feels that it might be helpful in advancing this case by calling the undersigned, applicant would greatly appreciate such a telephone interview.

Respectfully submitted,

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